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ABSTRACT

This study was conducted to analyze student background characteristics and educational history data that affect participation and performance of non-English language background students, including those with limited English proficiency, on Minnesota's Basic Standards Test. Data were obtained from individual student cumulative files in six schools in two districts with large numbers of non-English language background students. The cumulative files of more than 600 students were examined, but many (17% and 19% in the 2 districts respectively, with up to 100% at 1 school) were not usable. The review of student files resulted in the development of recommendations for better data collection, with the ideal being a computerized database for each school and district to eliminate duplication of records. Also needed are commonly recognized data elements to be collected for all English language learners. Selecting computer software to make sharing information easier is also recommended. Other recommendations center on the use of standardized tests and training for school staff. (Contains 10 references.) (SLD)

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Linking student and programmatic characteristics to test performance: Issues and solutions

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Two pieces of federal legislation, Title I of the Improving America's Schools Act and the National Education Goals, require that data be collected on the academic performance of at-risk students to measure their progress toward meeting high standards. According to Title I law local education agencies must "Obtain accurate information about the academic progress of schools, and about the progress of LEP [limited English proficient] and 'poor' children within these schools..." (August, Hakuta, Olguin and Pompa, 1995). Schools must then use the data to make school improvement decisions.

While the majority of states, districts and schools in the country are implementing some type of high standards, schools and districts are having difficulty collecting data and maintaining data files on which to base these instructional decisions (Far West Laboratory for Educational Research and Development, 1995). Collecting data on LEP students can be especially challenging.

One of the largest obstacles to collecting data on limited English proficient students (also known as English language learners or ELLs) is the high mobility rate of the students and the resulting stress that a highly mobile population places on schools. Kerbow (1996) urges educators and policymakers to view mobility as a central issue in reform initiatives. "Typically," Kerbow says, "student mobility and the resulting school instability are relegated to the status of a background condition--that is, they are viewed as part of an external context to which schools must adjust. But mobility's effects can be deep and pervasive, penetrating the essential activity of schools--the interaction of teachers and students around learning. Moreover, not only does mobility affect those students who are changing schools, it also more generally disrupts the functioning of

classrooms and the basic operations of schools (p. 163)." When there is a high mobility rate in a school:

- It is difficult to do longitudinal monitoring of a group of students when the membership in the group changes significantly over the school year (Kerbow, 1996; Asher, 1991)
- There are increased amounts of record keeping for school staff and possibly a decrease in staff commitment to collect data on students who may only be in the school for a short time (Asher, 1991)
- The time needed for student cumulative records, the "permanent" files that travel with a student, to arrive with a transfer student impacts the new school's ability to make appropriate placement decisions (Kerbow 1996; Nevada State Department of Education, 1996; Asher, 1991). Students may be the primary sources of information about their previous experiences, knowledge and skills (Lash and Kirkpatrick, 1990).
- The teachers often bear most of the responsibility for integrating new students into the classroom, along with their other duties, and may be overwhelmed by the task if there are significant numbers of new students (Kerbow, 1996; Nevada State Department of Education, 1996; Lash and Kirkpatrick, 1990). Having a high percentage of transfer students coming in to the classroom at different points during the year may impact the teacher's job satisfaction by making it difficult for teachers to plan cohesive instruction that will benefit students in the long-term (Kerbow, 1996; Lash and Kirkpatrick, 1990). In this kind of atmosphere teachers may feel less responsible for reading new student files and using the data to help make instructional decisions. Furthermore, data collection efforts at the school level often rely on

teachers to collect data and a teacher with a constantly changing population of students in his or her classroom may not be able to keep student files updated. Teachers are asking for help in collecting more and better data on highly mobile students (Lash and Kirkpatrick, 1990).

When examining schools' and districts' ability to provide data for research on reform issues, clearly the impact of mobility upon the quality and availability of data must be considered.

Purpose of the study

This study was conducted to thoroughly analyze student background characteristics and educational history data that affect participation and performance of non-English language background students, including students with limited English proficiency, in Minnesota's Basic Standards Tests (BSTs). The Basic Standards Tests are minimum competency tests in reading, mathematics and writing that students must pass by 12th grade in order to be eligible for a diploma. As the researchers collected and analyzed BST data and attempted to relate them to background and educational information on these students, observations about ways to improve data collection and storage were compiled.

Methods/Data Sources

A data collection form (see Appendix A) was created in cooperation with state education agency personnel who specialize in English Language Learners. Items to

include on the data sheet were drawn from a literature review, from data that districts submit to receive federal funding for English as a Second Language and Bilingual programs, and from the experience of state education agency personnel.

For Title I purposes, the federal government requires that large-scale assessment data be disaggregated by several categories (August, et al., 1995) including English proficiency, Special Education status, race and/or ethnicity, socio-economic status, migrant status and gender. However, for English language learners there are other ways to examine achievement data that may ultimately be more enlightening than simply examining achievement for all limited English proficient students as a group. In a study of the National Assessment of Educational Progress (NAEP), Abedi, Lord and Hofstetter (1998) found that data on length of time in the United States, length of time of academic schooling in the United States, and mobility are strongly related to the academic achievement of English language learners. These data elements were included on the data collection form.

Data collection forms were designed to be used with student cumulative files since these files are the "permanent" records that travel with students when they change schools.

Data were obtained from individual student cumulative files in six schools in two districts with large numbers of non-English language background students. There was one junior high and one senior high in each district, also an Alternative Learning Center (ALC) and a school for students with emotional-behavioral disabilities in one of the districts. One of the districts was a large urban district, and the other was a rural district. Cumulative file data were supplemented with data from ESL teacher files, district and

state databases, and other sources as needed. The cumulative files of more than 600 students were examined.

Findings/Results

In some schools a sizeable portion of the cumulative files contained so little data that they were not useable in this study, while in other files particular data elements often conflicted with each other, were outdated or were simply left blank. Table 1 below shows the total number of cumulative files that were not useable at each school.

Table 1: Cumulative Files not able to be Used

	Files reviewed	Files not used	% Files not used
District A			
District	137	23	17%
Sr. High	64	3	5%
Jr. High	47	2	4%
ALC	21	13	62%
EBD Site	5	5	100%
District B			
District	509	97	19%
Sr. High	390	92	24%
Jr. High	119	5	4%

Overall, the percentage of cumulative files not able to be used in Districts A and B was similar (17% and 19% respectively), but this is largely due to the fact that District

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A reviews included an Alternative Learning Center (ALC) and a site for students with emotional-behavioral disabilities (EBD) with high percentages of cumulative files that were not useable (62% and 100% of those reviewed). District B, the urban district, had the highest percentage of cumulative files that were not useable. In contrast, the Jr. High had a low percentage of unusable cumulative files. Junior high staff had obtained grant money to pay for a staff person to maintain files and, therefore, the quality of the records was quite good.

Given the fact that the percentage of useable cumulative files varies greatly between schools and districts in this study, what factors can account for this variability? It has been well documented that students who are the most economically disadvantaged are also among the most mobile (see Asher, 1991 for more on this topic). Non-English language background students, a group including those with limited English proficiency, are among those students who have the lowest socio-economic status and the highest mobility rates. Table 2 shows each of the schools and districts in this study with relevant demographic information about the percentage of LEP students in the school, the percentage of students receiving free or reduced lunch, and both inter-district mobility (in and out of the district) and intra-district mobility (between schools in a district). These factors directly impact the quality of the data that were obtained

Table 2: Demographic Information on Participating Schools and Districts

	State	District A (Rural)					District B (Urban)		
		District	Sr. High	Jr. High	ALC	EBD Site	District	Sr. High	Jr. High
Approx. Enrollment	853,000-856,000	4, 850-4,900	1,350-1,375	725-750	75-125	30	47,000-49,000	1300-1500	650-675
% LEP	3-5%	5-6%	8-9%	10-13%	19-22%	24-30%	15-16%	18-19%	15-16%
% Inter-district mobility	12-13%	21-22%	8-9%	10-13%	46-51%	74-96%	18-19%	15-21%	33-39%
% Intra-district mobility	3-5%	3-4%	2-3%	<1%	51-76%	55-74%	13-27%	17-20%	12-31%
% Free or reduced lunch	26%	35-40%	20-25%	30-35%	42-65%	62-78%	65-70%	65-70%	75-80%

**The demographic data reported here come from the MN Dept of Children, Families and Learning, Continuous Improvement Process website. These data are for the years 1997-98 and 1998-99 and are included here as a general indicator of issues the schools are dealing with. They are not data for the years in which the study was conducted.*

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The table above shows that in schools with high percentages of limited English proficient students, higher mobility rates and higher concentrations of students receiving free or reduced lunch, the percentage of cumulative files not able to be used was also higher. Not only did District B have the highest percentage of cumulative files not useable, it also had one of the highest percentages of students receiving free or reduced lunch (65%-70%), and the highest overall percentage of LEP students (15%-16%). While the inter-district mobility rate in district B is lower than that in district A, it is still higher than the state average. The intra-district mobility rate (approximately 13%-27%) is 4 times to 6 times greater than the state average. Clearly the condition of the cumulative records is related to these factors. However, again, this was true with one exception—the junior high in district B had files in good condition in spite of the fact that the school inter-district mobility rate is nearly 40% (three times the state average) the school intra-district mobility rate is roughly 30% (6 times to 10 times the state average), the percentage of LEP students is 15% to 16% (3 times to 5 times the state average) and that 75% to 80% of the student body receive free or reduced price lunches (3 or more times the state average). The state of the cumulative files in this junior high was directly related to the grant money that paid for their maintenance.

The ALC and the school for EBD students in district A, the rural district, have the highest mobility rates, but they are schools that draw a unique group of students for a program specifically suited to their needs. Students transfer into those programs from other schools in the district and are also drawn from the surrounding areas. A placement in the ALC may be temporary in nature, designed to get students back into their original junior or senior high. Therefore, high mobility rates in these two programs may be

partially related to the nature of the programs. When looking at the percentage of files not able to be used at the alternative learning center and the school for students with emotional-behavioral disabilities, it is important to keep in mind that the total number of the student files reviewed was very small due to small school enrollments.

Kerbow (1996) has suggested that schools examine the type of mobility patterns in their student body so that they can determine if a shared computer database of student records would be worthwhile. According to the data shown above, the schools in district B had roughly 15% to 30% of their student body transferring to and from schools within the same district. District A did not have high inter-district mobility rates, largely because the district has only one junior high and one senior high. It is not known whether districts A and B share any students who move between them. Therefore, district B schools would benefit from a shared database where student records could be exchanged rapidly via computer. In fact, the district does have such a database, but not all schools in the district are able to pay a trained staff person to operate the database and run reports.

When cumulative files were able to be used, data were first taken from this source. If certain pieces of information were missing or unclear in the cumulative file, other sources were consulted. Since cumulative files are the "permanent" files all data found in these files were taken as true if data in other sources conflicted with data in cumulative files. Table 3 shows particular pieces of demographic data that were included in the data collection effort and how many of the total set of files consulted in each district did not contain specific pieces of data. This does not mean the data do not exist somewhere, they just were not found in the files examined at the time of the study.

Table 3: Missing data for each demographic data element

	District A (rural) **n=114**		District B (urban) **n=412**	
	Files without data	%	Files without data	%
Gender	10	9%	6	2%
Home lang.	6	6%	155	38%
Grade	2	2%	0	0%
Graduation Year	1	<1%	43	10%
Time in district	31	27%	132	32%
School changes	50	44%	305	74%
Years in U.S schools	65	57%	241	58%
Years in U.S.	55	48%	150	37%
Free/reduced lunch	4	4%	14	3%

*Percentages are rounded

As shown in Table 2, time in the United States, time in U.S. schools, English proficiency levels and mobility are pieces of data that were found less often than pieces of demographic data in spite of the fact that these correlate highly with academic achievement. In district B, the urban district where the two schools had high percentages of limited English proficient students, high mobility rates and high percentages of students receiving free or reduced lunch, a basic data element such as a student's home

language was missing from the files about 40% of the time on the day(s) data were collected.

Tables 4 and 5 show pieces of language proficiency test data that were missing. This information was not kept in cumulative files. The data came from ESL teacher reports in district A and from the intake center for new students in District B. Typically, it is only limited English proficient students needing ESL or Bilingual services who are given a language proficiency test. District A gives the Woodcock Language Proficiency Battery, Revised Version (WLPB-R), which is a test normed on native speakers of English that measures academic English abilities. District B gives the Language Assessment Scale (LAS) to students who are new to the district.

Table 4: Missing Data for Language Proficiency Tests in District A

	District A (rural) n=114	
	Files without data	%
Woodcock Rdg	35	31%
Woodcock Writing	37	32%
Woodcock Broad English	40	35%

Table 5: Missing Data for Language Proficiency Tests in District B

	District B (urban) n=412	
	Files without data	%
LAS Oral Score	221	54%
LAS Oral Rank	205	50%
LAS Rdg/Wrtg Score	not given until student is level 4 oral (fluent)	not given until student is level 4 oral (fluent)
LAS Rdg/Wrtg Rank	not given until student is level 4 oral (fluent)	not given until student is level 4 oral (fluent)

As seen in Table 4, about 30%-35% of District A's non-English language background students do not have a Woodcock score in their files. This may indicate that they are not considered limited English proficient and have not been given the test because they are mainstreamed, or it may be that data are missing from files.

District B only gives the oral test of the Language Assessment Scale (LAS) to incoming students who are new to the district. District B policy is that if the student receives a "fluent" oral score (level four out of five possible levels), then they are given the reading/writing test. Since LEP students typically score at levels 1 and 2 on the LAS oral test, there is a lack of data on the LAS reading/writing test in district B. There are three possible reasons why fifty to fifty-five percent of District B's students do not have a LAS score on file. First, students may have transferred into the junior or senior high school in this study from other schools in the district and so were not given the LAS at the time of transfer. Second, some of the students in the study are Non-English language

background students who are not limited English proficient. Third, data may simply be missing from files. In district A, there are a number of students who move back and forth between Minnesota and a southern state. Time spent each year in a different school district may account for the fact that roughly 20% of English language learners in District A have a LAS score of some kind in their files even though District A does not give the LAS. Table 3 clearly shows that in both districts A and B, while the LAS Oral Rank and Oral Score should both be found in a student's file, often only one of these data elements is present.

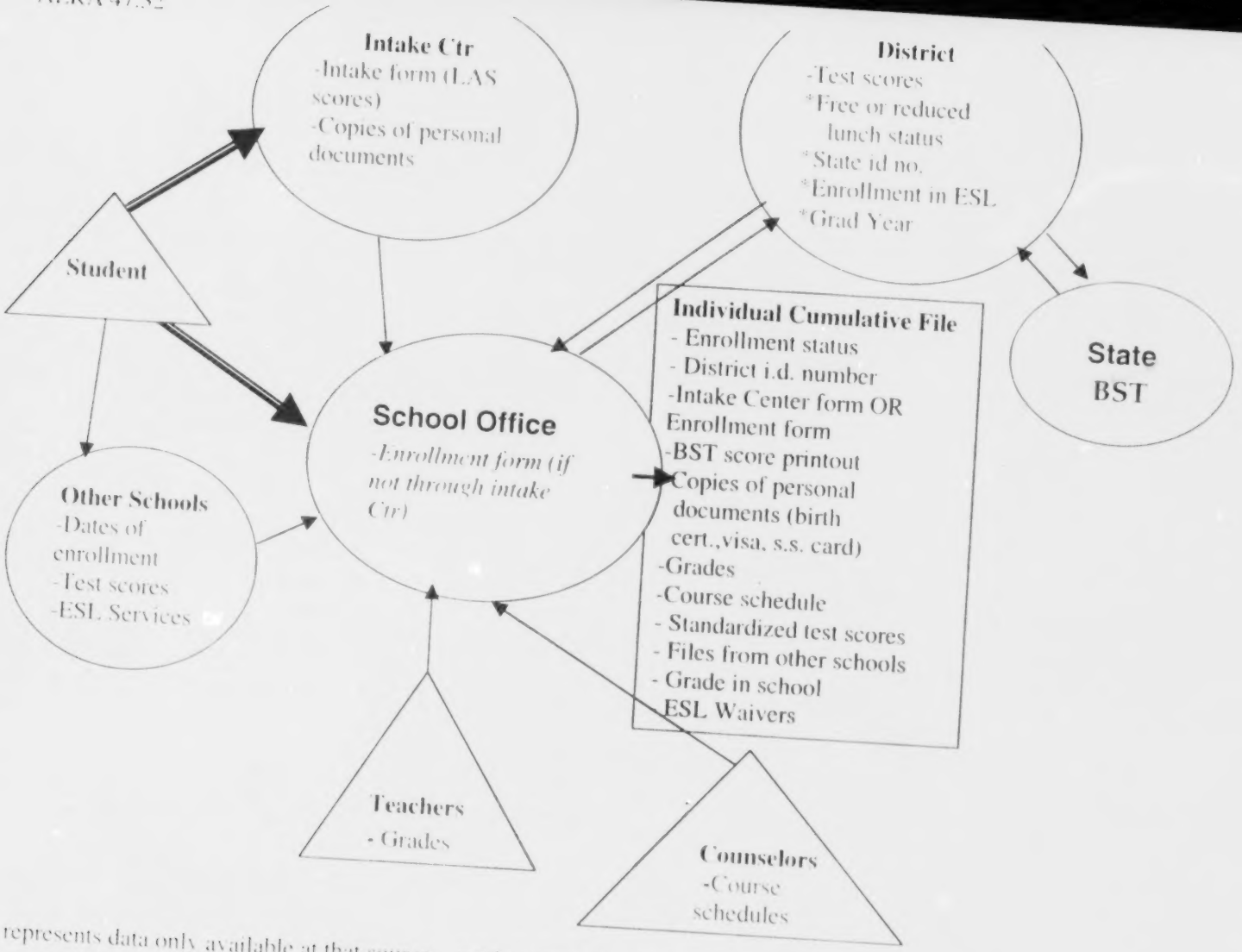
Other Problems in Data Collection

In addition to the problem of missing data, data from different sources often disagreed, making it difficult to determine which data were accurate. This happened for several reasons:

- Individual student files and student records in computer databases were updated at different times. Sometimes data were updated on a seemingly random schedule, so that data for one student might be several weeks or months older than data for another student
- Files that had useable data often had too much data kept in them, making it difficult to sort through all of the papers
- Since few school staff ever examined entire cumulative files, they may not be aware of conflicting data in the files
- Parents and students sometimes provided varying information about home language, date of birth, etc. These variations could be due to low-level English or native

language skills, lack of understanding, unwillingness to provide data that seemed too personal, or simply because the information was unknown (e.g., refugees from a culture that did not record birth dates sometimes have to create one for student files)

- Individual staff keep their own records and some data in those records do not get recorded in cumulative files (e.g., dates and results of English language proficiency assessments)
- Data from multiple records may be transferred inaccurately from one location to the next. In addition, the route from one school to another and to the district database is often very complicated, opening up a wide range of places for data to be misplaced or misentered. As an example, Figure 1 shows the flow of Data in District B and how many times some of the pieces of information collected in this study had changed hands. All pieces of data should flow into the cumulative file, but some do not make it there.



* represents data only available at that source – not in cumulative file

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Recommendations

Based on the results of this study and the results of the literature review, the following recommendations are given to improve the quality of, and access to, data on students with limited English proficiency:

Ideal

1. The ideal to work toward is a computerized database for each school and district in a state that would eliminate the need for multiple sets of files with similar types of information and allow for the ability to rapidly share files with other schools when students transfer. This would be a different database from the one kept by the state and could be accessed over the internet, as some school districts are already doing (Quest, 2000). Having such a database would take a large financial commitment to provide compatible computer equipment and software for each school, trained staff to enter data and maintain the database and personnel to collect the data. The results, however, could significantly strengthen teachers' ability to provide high quality standards-based education for English language learners and to show that the school and district are accountable for educating these students.

There are existing databases of student records that schools can look to as examples. One of the most widely implemented databases for tracking students was the Migrant Student Transfer System (MSTS), which has been phased out and replaced by the New Generation System, both developed by the Migrant Education Program of the federal government. Both systems were designed to collect and transfer education and health-related data on migrant students throughout the country. The Migrant Student Transfer System was a centralized database, while the New Generation System that is

currently in use is a web-based database. As schools and districts work toward the ideal of a shared computer database for English language learners, problems already existing databases provide helpful guidance on how to design a system teachers can use. According to Cahape (1993) and Asher (1991), problems with MSTS included: (1) inclusion of data elements for both local level and state level analyses overwhelmed data collectors and made them feel that there was no local use for many of the pieces of information collected. This, in turn, influenced their willingness to collect the data; (2) The system still relied on creation of paper documents before data were entered into the computer, creating multiple levels of reporting that resulted in delays in transferring data; (3) Lack of computer terminals connected to MSTS limited teachers' ability to use the system to obtain information for use in making educational decisions. Instead, those who used MSTS often used it to validate decisions that were already made; (4) Data collection methods were not standardized across states and this impacted educators' ability to use the data; (5) Migrant students and their parents did not have a well defined role in the system. As students moved between states they needed to notify new schools of their system identification number so that the new school could access student records. However, families were not always aware of their numbers or of the benefits to the student of having the MSTS. With the New Generation System, the database has been put on the Internet so that any pre-authorized person can access the database from a computer with a web browser. Having data on-line decreases the cost of transferring records, but the records are much less private (Asher, 1991).

2. Along with a shared database an ideal for states, districts and schools to work toward would be a commonly agreed upon set of data elements that are collected for all English language learners at the school and district level. The State Department of Education should work with schools and districts to facilitate conversation about what data elements are most beneficial for schools to collect for their own analyses. The National Center for Educational Statistics (2000) has created a data handbook with lists of recommended data elements and definitions that, if followed, would help data collection to become more standardized. Based upon the results of this study, the following pieces of data should be included for English language learners: Time in U.S., Time in U.S. schools, number of school changes, whether the student is identified as limited English proficient according to state criteria and would be eligible to receive ESL or Bilingual services (some who are eligible do not receive them) and the type of services, ESL or bilingual) a student receives along with an original starting date for those services. Each data element should have one agreed upon definition and one common operational definition that specifies how to record the data for that element. Having common definitions of data collected in the same manner would make it much easier for schools to interpret files they receive when students transfer and for outside researchers to use data from multiple schools in creating large data sets. Even if computer databases are not currently an option for many schools and districts, having an agreed upon set of terms and definitions would greatly enhance the quality of paper cumulative files as well. Keeping the number of data elements to a minimum is crucial so that school staff charged with collecting data are not overwhelmed by the task.

Steps Toward the Ideal

3. As a step toward a large database shared between many school districts, schools and districts should investigate the record keeping capabilities of their current computer software. Microsoft's Office 98 and Office 2000 come with a program called "Access" that can store a large amount of data and create reports (see http://www.athree.com/acess_info). Using Access, schools can create a simple database of the most important information on English language learners and create lists of students who meet particular criteria (Liu, 2000; Spicuzza, 2000). For example, if a school wants to examine the academic test scores of all students who speak Somali and have moved more than 3 times the software can easily create a list of these students. More sophisticated analyses require a more advanced type of database software such as Microsoft SQL Server (see http://www.microsoft.com/sql for more information). However, Access is part of a relatively common and inexpensive software package (cost about $340). With a limited amount of training, school staff who are comfortable using a computer could create a database that could be linked with others. For example, the ESL teacher could link her database to the database of student records kept by the main office in her school and reduce the need for both to have paper files with duplicate information. Student records in Access can be imported into Excel for more detailed reports and e-mailed to other parties who request access to data.

Three of the major drawbacks to using Access are: (1) That entering a large amount of data into the database slows down the time required for processing a report (Liu, 2000); and (2) That anyone with access to the system can alter data. For that reason, it is recommended that there be a person charged with maintaining the database

and creating reports for other people. Changes made to data found in individual reports would not affect the data in the master database (Liu, 2000); (3) That the system is not designed to be used by more than a few users at the same time (http://www.athree.com/access_info/pros_and_cons.html)

There are other software products that can create simple databases, such as Filemaker Pro (for more information see http://www.filemaker.com/filemaker.html). The researchers are not endorsing any particular piece of software. Something that is widely available would be preferable.

4. For any type of student files, computerized or paper, schools and districts should keep a list of commonly used acronyms and abbreviations with each file. For example, there are many different terms that can be used to refer to English language learners (ELLs) and schools vary in which ones they use-- limited English proficient (LEP), fully English proficient (FEP), non-English language background (NELB), language minority (LM), persons whose language is other than English (PHLOTE), English as a Second Language (ESL) student, etc. It is difficult for data users to interpret the data if there are no explanations of the terms.

5. Schools should strive, as much as possible, to give standardized tests uniformly-- the same sections of the tests, the same form (long vs. short) at the same ages to provide the most useable achievement data. Within one school it is difficult to find a large enough group of students with similar types of assessment data in order to do statistical analyses such as the correlation between a language proficiency test and a state graduation test. If educators would like to use data to advocate for different programming or for an alternative assessment for English language learners the assessment data on students

needs to be comparable across students. Schools should consider giving a language proficiency test to English language learners on a regular basis rather than just once to those students who are new to the district.

6. School staff who collect data should fill out forms or fill in fields in a database completely, even if answers seem obvious. For example, many times the student's primary language is not found in cumulative files. It might be easy to look at a student's name and guess what primary language he or she speaks, but such a guess might not be accurate. A person with a Chinese name, for example, could have been born in Central or Latin America and speak Spanish as a first language. Filling in forms completely, using "NA" for not applicable, giving both a raw score and a scale score for tests, if the form asks for both, would greatly improve the quality and usefulness of data. It would also make it easier for errors in data recording to be detected.

7. School staff who work with data and who do not have a background in English as a Second Language or Bilingual Education should receive training in basic terminology used to refer to these students. The quality of data and of reports based on those data are related to the ability of staff to make distinctions between closely related and sometimes overlapping terms. For example, if a district data office is requested to print a report of all students who are "language minority", those staff should be familiar with the term and know how it is different from the term "minority students". If a district creates a list of commonly used terms in that district it is much easier to make data requests using standard terminology.

8. Data kept in paper or computer files should be reviewed periodically to make sure it is still useful, to find conflicts and errors, to locate incomplete data elements and fill them in. This is done more easily if only essential pieces of information are kept in the student's "permanent" record. In more than one of the schools in this study, files contained so much data that few staff members had ever examined every piece of information in the file from beginning to end. Therefore, staff may not have been aware, for example, that highly mobile students had multiple forms asking about their home language (one administered each time students transferred). Even though these forms were translated into the students' native language and English, parents often completed the forms differently over time. One time the parent gave Vietnamese as the student's home language, the next time English, and the third time both Vietnamese and English equally. This discrepancy led researchers to believe that parents may not have understood how the information would be used, may not have had sufficient literacy skills to read the home language forms, may have believed that filling out the forms in a particular way would be an advantage to their child, etc. Less data in the files would have made this particular discrepancy easier to detect and in the case of this study, would have made it easier for both the initial file reviewer and the second rater to find the same piece of data on a student.

9. Schedules for updating paper files and especially computer databases should be posted in the area where the files are kept so that it's clear to data users that some files may contain newer data than others (e.g., some files have the most recent statewide test scores

entered and others do not). This is particularly important in large urban and suburban districts where there are too many files to update them all at the same time.

10. In each file or in the area where files are kept, districts should post an updated list of changes in school names and school reorganizations that result in different grade levels being served in a building from year to year. It is difficult to accurately count the number of school changes a student has had if it is not clear whether two different school names in a file represent a student transfer or the renaming of a school. School staff may not have been employed in the district long enough to know the history of all such changes.

11. Efforts should be made to make the same data file accessible to parties with a legitimate use for the data. If a database exists in a school or district, often administration and program directors are the ones who have access to it and teachers, counselors and school psychologists use the cumulative file. (Outside researchers often do not know what information is kept in what location.) If the information in the database and the cumulative file duplicate each other, often the cumulative file is not maintained as well as the database and those with greatest need for current information are not receiving it. For example, in one of the districts studied, the district computer database had information on each student's mobility, but this information was not in the cumulative file. Given that mobility has been found by many researchers to significantly impact student achievement, this is a piece of information that educators, counselors and school psychologists should have access to. Furthermore, if only one computer with a district database is available for teachers in a large metropolitan school, data will not be used to

inform decisions at the classroom level. Federal and State Departments of Education should consider giving funding for computers so school accountability data that are collected can be more easily accessed and used by teachers.

12. School staff need training and support in how to use data for making educational decisions. In fact, their ability and willingness to collect data on individual students and maintain student files may depend upon their understanding of how that data can be used on a daily basis to the benefit of their students. State Departments of Education should consider providing such training to all types of staff, not just to administrators.

13. Districts and schools should clearly indicate on the transcript which classes are considered ESL or Bilingual Education classes. For example, a course such as "6466 Advanced Reading and Writing" is clearly an ESL class, but a course such as #6235 Physical Science is not necessarily listed on a school transcript as being taught in Spanish. Often times, the titles of courses are too long to completely fit on transcripts and what appears is a course number and the first few words. This issue arose in the high school in district B. A review of course enrollments, found in the cumulative files, did not indicate that any students were taking classes considered ESL or Bilingual Education, but the course schedule listed 37 possible ESL or Bilingual content classes. In district B, the closest approximation researchers could obtain to whether a student was getting ESL or Bilingual services at the time they took the Basic Standards Tests was whether the district database listed a start date for ESL or Bilingual Services.

Resources

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